Resonant Announces Acquisition of Specialty Filter Design Company

Dr. Victor Plessky, Founder of Swiss-Based GVR Trade SA, to Join Resonant as Director of Engineering; Acquisition Further Enhances Resonant’s ISN capabilities

GOLETA, Calif.--Resonant Inc. (NASDAQ: RESN), a designer of filters, duplexers and quadplexers for radio frequency, or RF, front-ends that specializes in delivering designs for difficult frequency bands and complex requirements, today announced it has purchased 100% of GVR Trade SA (GVR), a Swiss-based company specializing in the consultation and design of Surface Acoustic Wave (SAW) and Bulk Acoustic Wave (BAW) devices, from its sole shareholder, Dr. Victor Plessky, for approximately $1.1 million in stock and cash.

“This acquisition of GVR is a logical extension to the existing long-term cooperation between our two companies,” said Terry Lingren, CEO of Resonant. “Our collaboration during the past eight years has resulted in the creation of some of the world’s best tools for the design and development of high performance filters, duplexers and quadplexers that currently dominate the RF front-ends of the LTE handset market. Victor and his team add a tremendous depth of knowledge and meaningfully enhance our ISN® Suite of filter design tools and throughput capabilities, thereby, further expanding our ability to support licensing agreements for both current and future partners and customers.”

“GVR is well known for its speed of services and cutting edge modeling techniques that can deliver enhanced designs. Victor and GVR have been at the forefront of acoustic wave filter design, publishing some of the most advanced works in the area for more than 30 years, with over 350 publications and over 2,000 citations,” Mr. Lingren concluded.

Dr. Plessky has joined Resonant as Director of Engineering and Resonant will also retain other key GVR technical staff. GVR currently markets FEMSAW, an advanced, finite element modelling tool for SAW resonators. Dr. Plessky and his team have been instrumental in developing some of the most advanced techniques in advanced filter design and have been responsible for some of the industry’s most notable publications, including, “Coupling-of-mode analysis of SAW devices” - https://www.researchgate.net/profile/Victor_Plessky. Most recently, Dr. Plessky and his team have authored a paper that has been accepted for publication at the IEEE IUS conference in September, “Hierarchical Cascading in 2D FEM Simulation of Finite SAW Devices with Periodic Block Structure.”

GVR has been engaged with the Resonant team since 2008 and have been under contract since 2012. They have collaborated in the development of an essential and specific component of Resonant’s Infinite Synthesized Network (ISN®) platform. Resonant believes ISN is one of the most advanced physical electro-acoustic tools and is capable of modeling today’s most sophisticated and advanced SAW processes and filter designs. Dr. Plessky will be joining Resonant as a full time employee to assist the Company in the further development and improvement of its ISN platform.

Dr. Plessky co-founded GVR in 1996 and purchased 100% of the company in 2003. He also worked as the Special Projects Manager at Advanced SAW Products, and was Principal Scientist and Bureau Manager of Thales Microsonics. In addition, Dr. Plessky served as a Visiting Professor at the Helsinki University of Technology, Finland, and at Universities in Germany, Switzerland, France and Sweden. He received his PhD from Moscow Physical & Technical Institute and Doctor of Science at the Institute of Radio Engineering and Electronics, Academy of Sciences, in Moscow. He holds a title of “Full Professor” from Russian Government (1995). Dr. Plessky has authored more than 130 papers in refereed journals and has contributed eight invited papers as well as more than 100 conference papers. He currently holds 22 issued and pending patents in the U.S. and Europe, as well as 20 patents in Russia. He consulted and/or supervised 14 PhD thesis works. Dr. Plessky served as an elected member of AdCom of IEEE UFFC society and was a long time member of Technical Program Committee of the IEEE International Ultrasonics Symposium.

“For GVR, this acquisition means greater access to resources and provides the possibility to concentrate our efforts on the most important areas and principal problems of SAW physics and devices,” said Victor Plessky. “Being part of the Resonant team creates new and exciting opportunities for everyone as a combined entity.”

About Resonant® Inc.
Resonant is creating innovative filter designs for the RF front-end, or RFFE, for the mobile device industry. The RFFE is the circuitry in a mobile device responsible for the radio frequency signal processing and is located between the device's antenna and its digital baseband. Filters are a critical component of the RFFE that selects the desired radio frequency signals and rejects unwanted signals and noise.

About Resonant's ISN® Technology

Resonant can create designs for hard bands and complex requirements that we believe have the potential to be manufactured for half the cost and developed in half the time of traditional approaches. The Company's large suite of proprietary mathematical methods, software design tools and network synthesis techniques enable it to explore a much broader set of possible solutions and quickly derive the most optimal solution. The improved filters designed with ISN still use existing manufacturing methods (i.e. SAW) and can meet the performance of filters using higher cost methods (i.e. BAW). While most of the industry designs surface acoustic wave filters using a coupling-of-modes model, Resonant uses both circuit and physical models. Circuit models are computationally much faster, and physical models are highly accurate, based entirely on fundamental material properties and dimensions. Resonant's methodology delivers excellent predictability, enabling achievement of the desired product performance in roughly half the number of turns through the fab. In addition, because Resonant's models are fundamental, based upon basic materials properties and dimensions (the foundation of a fab. process), the interface between Resonant design and its foundry and fab customers is facilitated.

About GVR Trade SA

GVR, based in Gorgier, Switzerland, works in the area of Surface Acoustic Wave (SAW) and Bulk Acoustic Wave (BAW) devices, with a specific concentration on the design of SAW RF filters and resonators. The Company's main activities include design of Temperature Compensated (TC)-SAW and SAW devices (filters, resonators, sensors, SAW tags, etc.), manufacturing of TC-SAW and SAW devices (in collaboration with German, Taiwanese and Korean companies), research projects in SAW/TC-SAW/BAW and related areas, patenting of new design ideas, consultation, lecturing, and training on SAW physics and devices and software development for research applications and for design of devices. The company participated in a few European Research Projects. For more information, please visit www.gvrtrade.com.

Safe Harbor/ Forward-Looking Statements

This press release contains forward-looking statements, which include the following subjects, among others: expected benefits to Resonant from the acquisition, including the contributions to be made by Dr. Plessky and his team to development of filter design tools. Forward-looking statements are made as of the date of this document and are inherently subject to risks and uncertainties which could cause actual results to differ materially from those in the forward-looking statements, including, without limitation, the following: our ability to successfully integrate GVR operations with those of Resonant; our ability to manage a European-based development team; and the risk that the anticipated benefits of the acquisition may not be realized. Additional factors that could cause actual results to differ materially from those anticipated by our forward-looking statements are under the captions “Risk Factors” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” in our most recent Annual Report (Form 10-K) or Quarterly Report (Form 10-Q) filed with the Securities and Exchange Commission. Forward-looking statements are made as of the date of this release, and we expressly disclaim any obligation or undertaking to update forward-looking statements.


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